United States Environmental Protection Agency
Region I - EPA New England
5 Post Office Square
Boston, MA 02109-3912

Finalized Date: June 25, 2014

Subj: Inspection Report
Hull WPCF

From: David Turin

Thru: Denny Dart

To: File

I. Facility Information

A. *Facility Name:* Hull WPCF

B. *Facility Location*: 1111 Nantasket Ave
Hull, MA 02045

C. *Facility Contacts:* Jim Dow, Asst Dir. Public Works - Sewer
781-925-1207

John Marcin, United Water
781-925-1207, John.Marcin@UnitedWater.com

D. *NPDES ID Number:* MA0101231

II. Background Information

A. *Date and time of inspection:*
Facility entrance: June 9, 2014, 10:45 am
Facility exit: June 9, 2014, 2:30 pm

B. *Weather Conditions:* Partly Sunny; brief rain shower.

C. *US EPA Representative(s):* David Turin

D. *State/Local Representative(s):* David Burns, MassDEP

E. *Federally Enforceable Requirements Covered During the Inspection:*

CWA NPDES

F. Previous Enforcement Actions: N/A

III. Type and Purpose of Inspection

The inspector went to the facility to observe conditions at the facility approximately 1 year following catastrophic flooding and loss of all electrical and hydraulic capacity at the plant that occurred on February 28, 2013.

IV. Facility Description

Facility is a municipal wastewater treatment plant serving Hull, MA.

V. Inspection

Inspection began with a meeting with Beth Murphy, a United Water environmental compliance manager for Rhode Island, Connecticut, and Massachusetts United Water; John Marcin, United Water Area Manager, Northeast Division; and Jim Dow, Asst. Director DPW, Chief Facility Manager WWTP, Hull Permanent Sewer. David Burns, MassDEP – Lakeville joined the EPA inspector. The Town of Hull reported that financing to pay for $4.5M in flood cleanup and POTW capital improvements passed the town Board of Selectmen on May 6, 2014. Capital improvements include a new HVHC (high voltage high current) system and a plant headworks bar screen. Other covered work includes repairs to a broken sewer pipe at "gun rock" that had allowed infiltration to the collection system. Problems with clogs of pipes and bar racks attributed to disposal of flushable and not flushable wipes were also discussed. The town has distributed information educating customers that many of these wipes are not "flushable" and is considering other efforts, including educational signs at the town's main supermarket.

United Water reported that it is working on a final report regarding the flooding that occurred at the plant in late February 2013. The EPA inspector was told that the report would be provided to the agencies after the Town has an opportunity to review it. A firm deadline was not discussed, but United Water suggested that the Town should have a draft in the next few weeks. There was some discussion regarding the need for a complete analysis of the factors that led to the flooding as well as the response and the measures that can be taken to avoid a repeat event.

Dave Burns (MassDEP) indicated that as part of the site inspection, he would like to see the PS that had a force main failure this past winter.

The site inspection was led by Mr. Marcin. Joe Messier, the United Water Project Manager, joined us during the site walk through.

The step bar screen was damaged during the flood (see Pic 1 in photo log). The facility is using a secondary coarse bar screen during repairs and has added a fine bar screen to improve screening. After the step screen is replaced, the coarse and fine bars will become backup screens.

A small quantity of oil was observed on the floor of the Grit Blower room under an air compressor (see Pic 6 in Photo Log). The inspector was told that the facility staff were not aware of the leak, though an absorbent material had been spread under the equipment. The inspector was informed that the oil would be cleaned up and the leak investigated.

In the Pump Room the inspector observed repairs that had been made to pumps that had failed, contributing to the flooding event. The pumps were further damaged when the pump room subsequently flooded.

Outside, the inspector observed an area affected by an overflow of a sludge storage tank that overflowed the day prior to the inspection. The area had been treated by lime (See Pic 9 in the Photo Log). At the time of the inspection, the facility was still investigating the cause of the overflow. Preliminary indications were that a utility water connection filled the tank faster than expected and an alarm failed.

The septage receiving catch basin was observed (see Pic 10 in the Photo Log). The inspector noted that there is a stormwater catch basin adjacent to the septage receiving area (see Pic 11 in the Photo Log). Facility staff indicated that the only "septage" accepted at the facility is leachate from a closed landfill, which is "mostly water."

One primary clarifier is on line, the second is off-line and empty. The extra capacity is currently not needed, and the facility is investigating whether the second primary tank can be used to temporarily replace the final clarifier that is currently off-line for repairs (see below).

The aeration tanks are set up with an anaerobic stage to improve settleability. Some foam and floating sludge was observed on the final clarifier (see Pic 16 in the Photo Log). Addressing the foam and sludge was reported as one of the reasons for the anaerobic zone in the aeration tank.

As noted above, the second final clarifier is currently off-line for repairs because an influent pipe clamp failed and the tank had to be drained to do repairs.

The effluent pump room was inspected. All four pumps were flooded during the flooding event and have been rebuilt. A backup unit is "en route" to the facility

The EPA Inspector inquired cleaning and was told that United Water is responsible for the collection system and that 42K ft/yr are jetted, resulting in the entire system being

cleaned every 10 years. Since the program was initiated, they report the entire system has been cleaned twice. Ten thousand ft/yr are CCTVed. The inspector asked whether there is a priority cleaning plan and was told that there is a list of "hot spots" that are inspected or cleaned more frequently. It was not known if there is a written record of these locations. The Inspector recommended that a priority cleaning program be recorded to ensure continuity of the program through personnel changes.

Regarding sample analysis, the facility reported that everything except pH, TRC and settleable solids are sent out for analysis. The facility indicated that it used to do some analysis in-house, but since the flood has sent everything to external labs (RI Analytic for BOD, TSS, toxicity and metals and a lab in GNL in Quincy for bacteria). It indicated that it had no current plan to go back to in-house analysis.

Prior to visiting PS 4 (per the MassDEP Inspector's request during the in-briefing), there was a brief exit briefing. During the briefing, the EPA Inspector reiterated his interested in reviewing the complete report regarding the causes of the flooding in February 2013 and the steps that have or can be taken to prevent a similar event from a) happening again and b) having a similar devastating impact of the facility if it does. Reminded the facility Indicated that it needed to repair the leak and clean up the small oil spill associated the air compressor in the Grit Blower Room, and should consider developing a collection system priority cleaning plan.

The EPA and MassDEP Inspectors, Beth Murphy and Joe Messier then proceeded to PS 4, which had experienced a force main break and emergency repair over the winter. During this event, flow was discharged via a stormwater catchbasin across the street from the PS (see Pic 19 in Photo Log) to Hull Bay. The facility became aware of the break because overflow from the break flowed back into the building and set off a sump pump alarm. The facility used a 4 tanker trucks to pump sewage from a manhole to keep up with inflow and stop the SSO. The broken pipe was repaired by clamping in a 21" length of ductile pipe.

According to Messier, the Town has 6 pump stations (Hingham maintains a PS that discharges to Hull that is monitored only for flow). The PSs all reportedly have SCADA and all but PS A have backup power. PS A reportedly has a hook-up for portable generator. The PSs are reportedly visited every day. The EPA Inspector asked if they maintain a log of inspections. The project manager wasn't sure; he didn't see one on site but thought it might be kept in the truck.

This concluded the inspection.